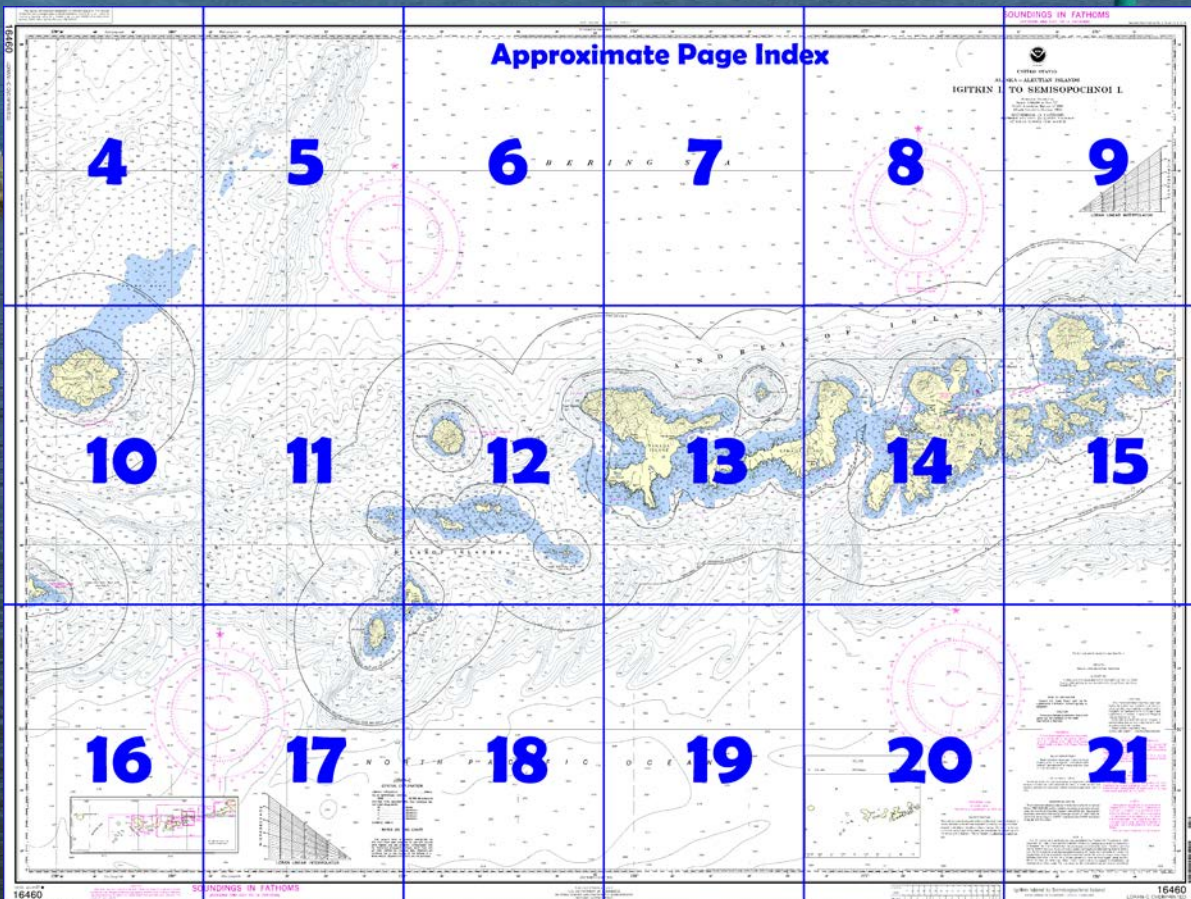
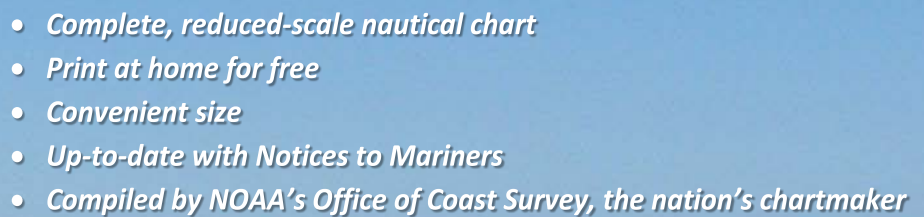


***A reduced-scale NOAA nautical chart for small boaters***  
***When possible, use the full-size NOAA chart for navigation.***



**Published by the**  
**National Oceanic and Atmospheric Administration**  
**National Ocean Service**  
**Office of Coast Survey**  
[www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov)  
**888-990-NOAA**

**What are Nautical Charts?**

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

**What is a BookletChart™?**

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

**Notice to Mariners Correction Status**

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=16460>.



**(Selected Excerpts from Coast Pilot)**

**Kanaga Island**, across Adak Strait from Adak Island, is roughly right-angled and extends 18 miles N and S, 28 miles E and W, and has a maximum width of 7 miles. **Kanaga Volcano** (chart 16471), at the N end of the island, is cone shaped, rising directly from the water to 4,416 feet; steam may emit near the summit. In clear weather this excellent landmark is visible from all directions. There are several lesser peaks S of the volcano from which the land slopes

down abruptly to rolling tundra-covered hills, 600 to 100 feet high, interspersed with numerous streams and lakes.

The Bering Sea Aerological Unit stationed at Kanaga Bay found that the Kanaga Volcano could be utilized as a means for forecasting bad weather. The volcano peak is seldom absolutely clear of clouds. During April 1934, it was observed that invariably the day or night before a gale the peak made its appearance, shorn of all clouds and with wisps of steam around the crater. During the summer of 1953, the phenomenon was noted on several occasions, but it is not infallible, as evidenced at other times when bad weather did not follow clear visibility of the peak. The S coast of Kanaga Island is low, rocky, and very broken with numerous offshore rocks and reefs marked by kelp fringing the shore. The coast should be cleared by at least 2 miles to avoid the dangers. The waters off **Cape Tusik**, 3 miles W of Kanaga Bay, appear much disturbed with strong currents. A dangerous shoal extends SSW for 2 miles off the prominent headland 2 miles NW of Cape Tusik. Depths of 16 fathoms are on the outer part, decreasing to much shallower depths closer inshore.

The N coast of Kanaga Island W of Cape Miga trends S for 7 miles, then SW for 20 miles to Kanaga Pass. From Cape Miga for 7 miles S to **Bellevue Beach**, the coast is steep-to with off-lying dangers within 0.5 mile of the shore. The 2-mile sand beach is backed by low ground and dunes. Good anchorage is afforded in SE weather off the beach; avoid the several detached offshore rocks. Landings can be made on the beach.

The coast between Bellevue Beach and Kanaga Pass is generally rocky and irregular, with a wide band of kelp and rocks parallel to the shore. Most of the points of land are low rocky cliffs; steep grass bluffs between the points rise to the relatively flat and rolling interior. The coast should be given a clearance of 1.5 miles to avoid the dangers.

**Ship Rock**, 1 mile offshore and 5 miles W of Bellevue Beach, is 49 feet high and resembles a ship; foul ground is between the rocky islet and the shore. Good anchorage in S weather can be had 4.5 miles W of Ship Rock in the cove W of **Cabin Point** in 18 fathoms, smooth sand bottom; approach with caution to avoid the covered rocks and pinnacles off Cabin Point and Pincer Point. A trapper's cabin is on the W side of Cabin Point. A group of pinnacles, covered 7 to 25 feet and marked by kelp, is 0.4 mile off double-ended **Pincer Point**, 5.2 miles W of Ship Rock.

**Hive Rock**, 7.5 miles W of Ship Rock and 0.4 mile offshore, is an 80-foot-high hive-shaped pinnacle. Heavy kelp is between the rock and the shore. Good anchorage is afforded in S weather 0.6 mile NE of the rock in 20 fathoms, smooth sand bottom; approach should be made from the N. A rock that uncovers and marked by kelp is 1.3 miles offshore, 8.7 miles W of Ship Rock; foul ground is between the rock and the shore.

**Tanaga Island**, across Kanaga Pass from Kanaga Island, is irregular in shape with greatest N-S length of 20 miles and E-W width of 23 miles. The N part of the island is high and mountainous, while the S part is low with many streams and small lakes or ponds. The N shore has precipitous rocky cliffs or very steep slopes which rise to the interior mountains. The other shores are rocky cliffs or reefs with numerous along shore pinnacles, except for beaches in Tanaga Bay and a few other places. The S coast and much of the E coast of Tanaga Island is fringed with detached rocks, reefs, and foul ground. Extensive kelp patches are in the foul areas. The dangers can be avoided by clearing the coast by over 2 miles.

**Currents.**—The direction and velocity of the current is radically affected by the land areas and the banks. It appears that the flood is diverted by the chain of islands - Skagul to Unalga - and the relatively shoal water between them to an E and W direction in moving around this chain.

**U.S. Coast Guard Rescue Coordination Center**  
**24 hour Regional Contact for Emergencies**

RCC Juneau      Commander  
17th CG District      (907) 463-2000  
Juneau, Alaska



# Table of Selected Chart Notes

## AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

## CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

## CAUTION

Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

○ (Accurate location)    ◐ (Approximate location)

## WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

## PROHIBITED AREA

Amchitka Island

Regulations are published in 50 CFR 36.39

## RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

## NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers.

## NOTE B

### CHEMICAL MUNITIONS DUMPING AREA - RESTRICTION

Site was formerly used or designated for U.S. Chemical munitions dumping. Such use has been discontinued. Designation of such area in no way constitutes authority for dumping.

## LOCAL MAGNETIC DISTURBANCE

Differences of as much as 7° from the normal variation have been observed on Gareloi Island southeast of Mt. Gareloi and on Semisopchnoi Island near Sugarloaf Head.

Differences of as much as 11° from normal variation have been observed in Kagalaska Strait, near the northern entrance.

## LORAN-C

### GENERAL EXPLANATION

LORAN-C FREQUENCY ..... 100kHz.

PULSE REPETITION INTERVAL  
9990 ..... 99,900 Microseconds

STATION TYPE DESIGNATORS: (Not individual station letter designators)

M ..... Master  
W ..... Secondary  
X ..... Secondary  
Y ..... Secondary  
Z ..... Secondary

EXAMPLE: 9990-X

### RATES ON THIS CHART

9990-X 9990-Y 9990-Z

The Loran-C lines of position overprinted on this chart have been prepared for use with ground wave signals and are presently compensated only for theoretical propagation delays which have not yet been verified by observed data. Mariners are cautioned not to rely entirely on the lattices in in-shore waters. Skywave corrections are not provided.

For Symbols and Abbreviations see Chart No. 1

Mercator Projection  
Scale 1:300,000 at Lat. 52°  
North American Datum of 1983  
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS  
(FATHOMS AND FEET TO ELEVEN FATHOMS)  
AT MEAN LOWER LOW WATER

## AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard and Geological Survey

## SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

## HEIGHTS

Heights in feet above Mean High Water.

## POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

## HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum 1983 (NAD 83) and for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 5.0677" southward and 8.994" westward to agree with this chart.

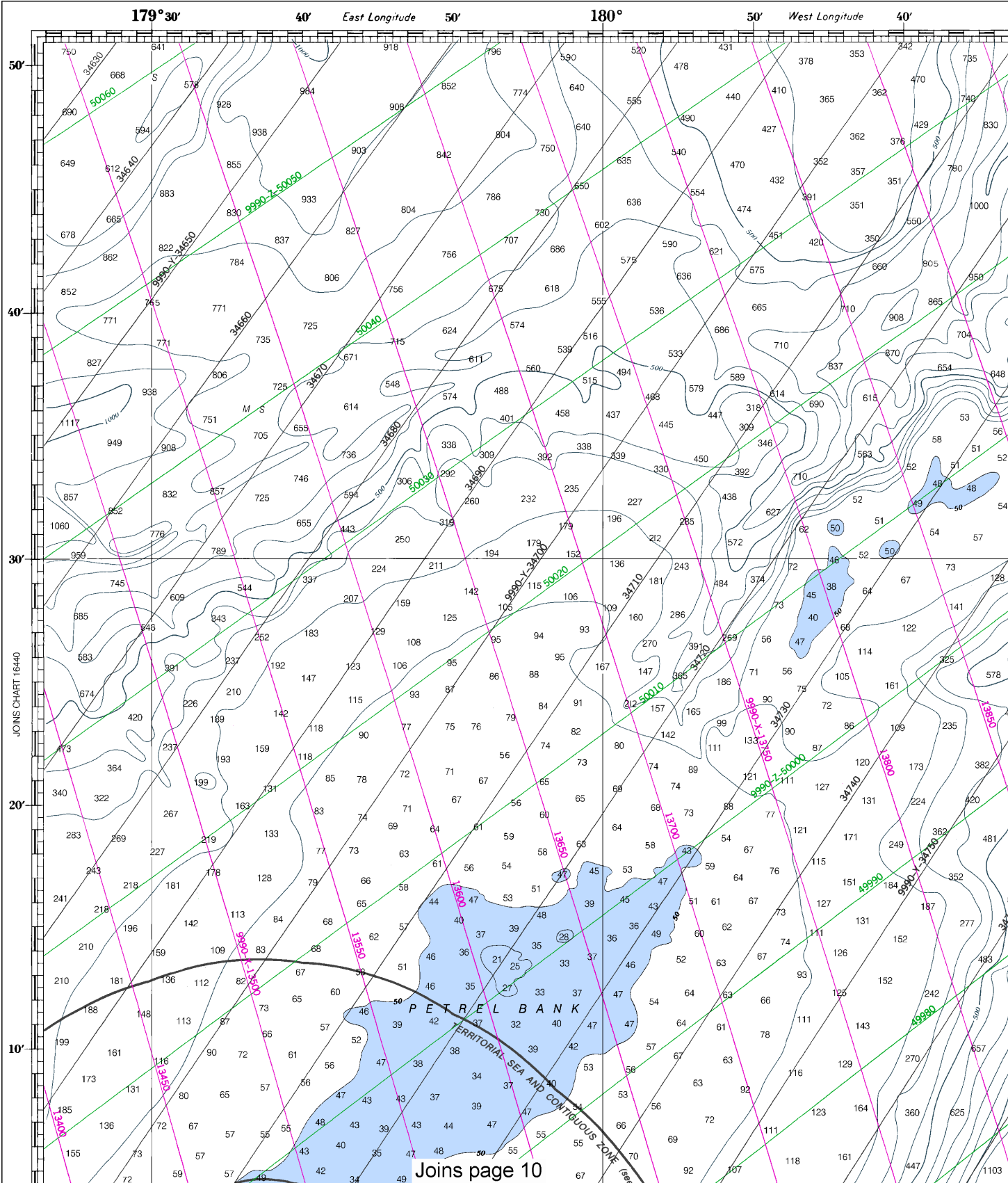
## NOTE X

The 12 nautical mile territorial sea was established by Presidential Proclamation 5928, December 27, 1988, and is also the outer limit of the U.S. contiguous zone for the application of domestic law. The 3 nautical mile line, previously identified as the outer limit of the territorial sea, is retained because the proclamation states that it does not alter existing State or Federal law. The 9 nautical mile natural resources boundary off Texas, the Gulf coast of Florida, and Puerto Rico, and the 3 nautical mile line elsewhere remain the inner boundary of the Federal fisheries jurisdiction and the limit of states' jurisdiction under the Submerged Lands Act (P.L. 83-31; 67 Stat. 29, March 22, 1953). These maritime limits are subject to modification, as represented on future charts. The lines shown on the most recent chart edition take precedence.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

16460

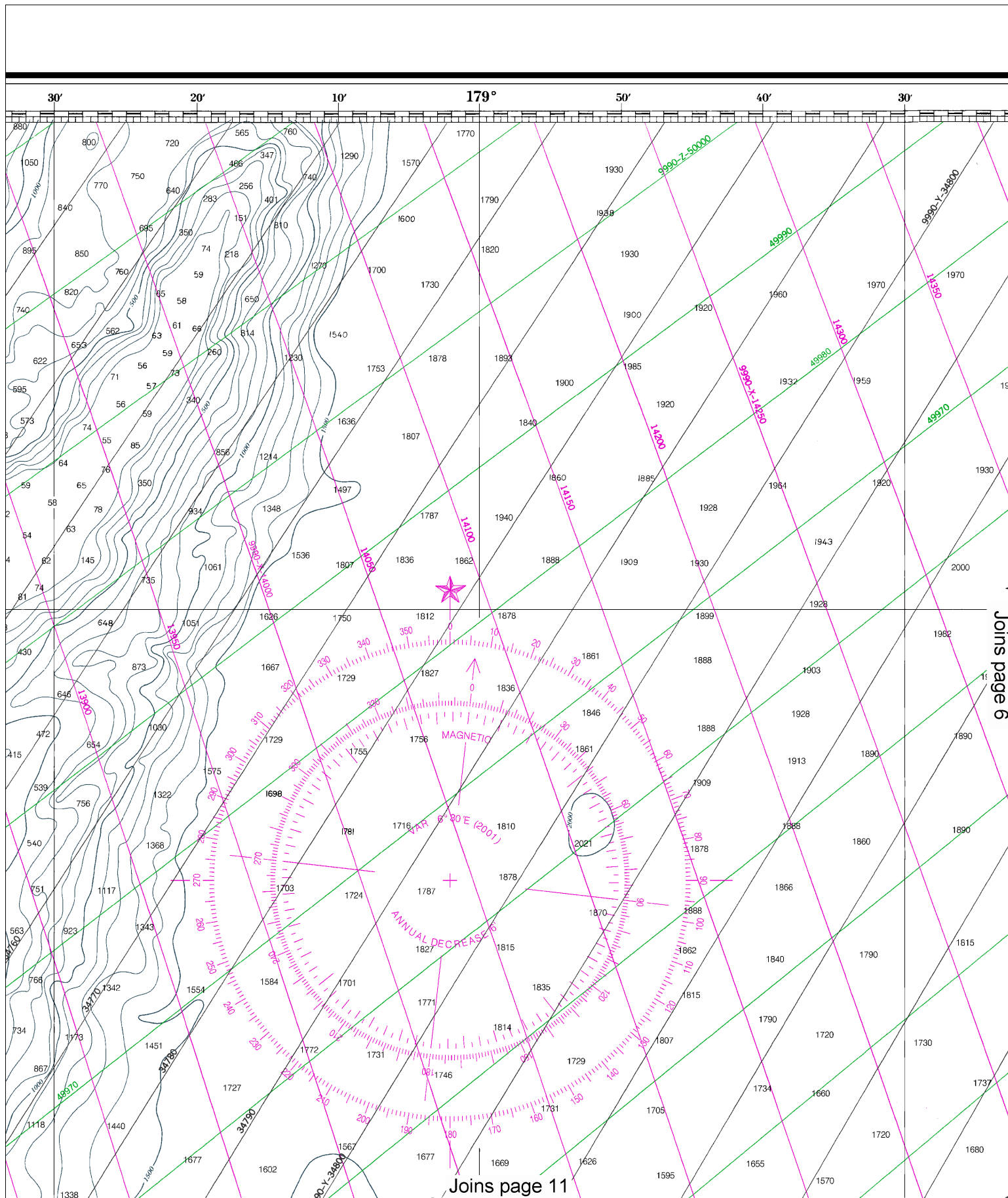
LORAN - C OVERPRINTED



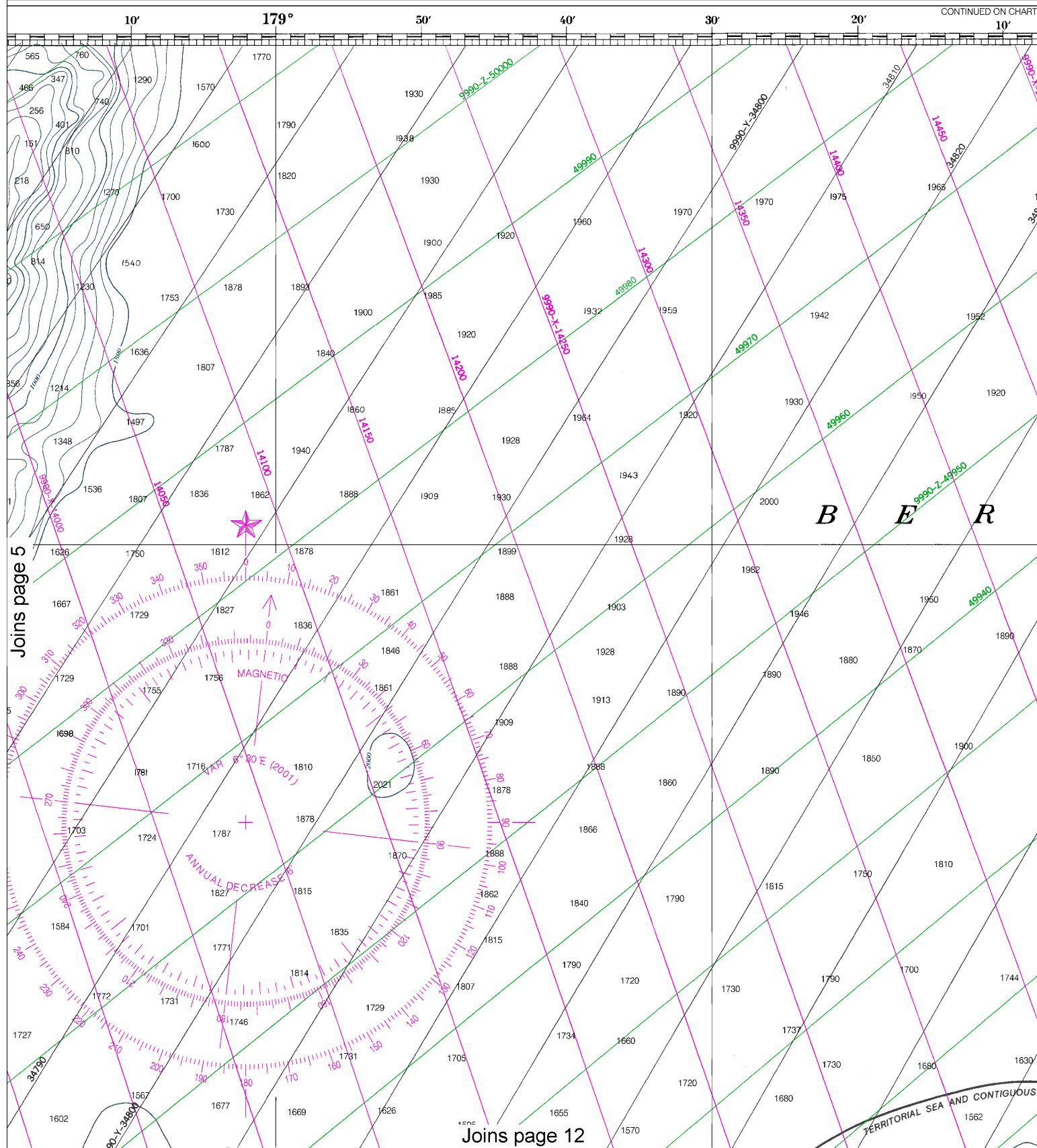
4

Note: Chart grid lines are aligned with true north.



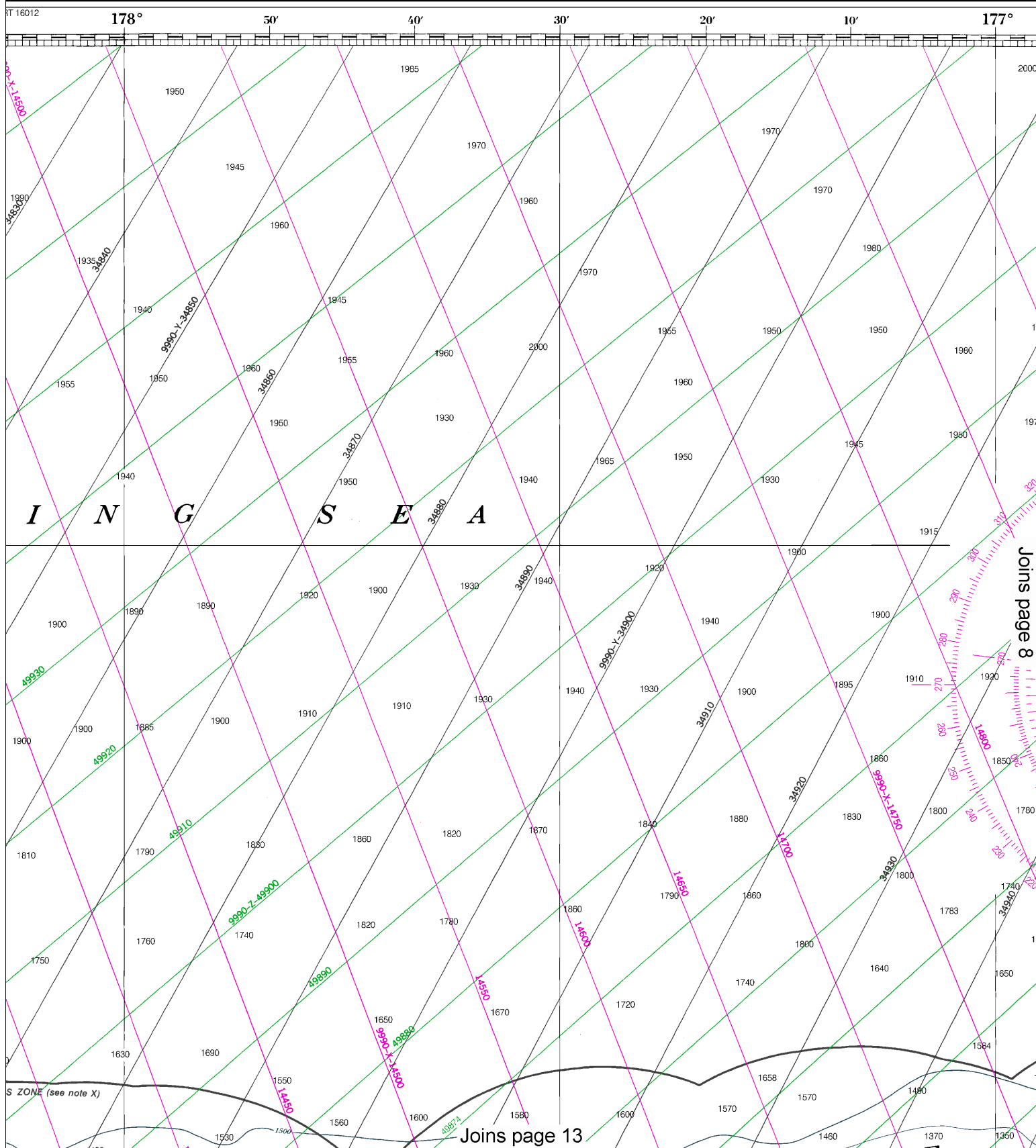


This BookletChart was reduced to 75% of the original chart scale.  
 The new scale is 1:400000. Barscales have also been reduced and  
 are accurate when used to measure distances in this BookletChart.



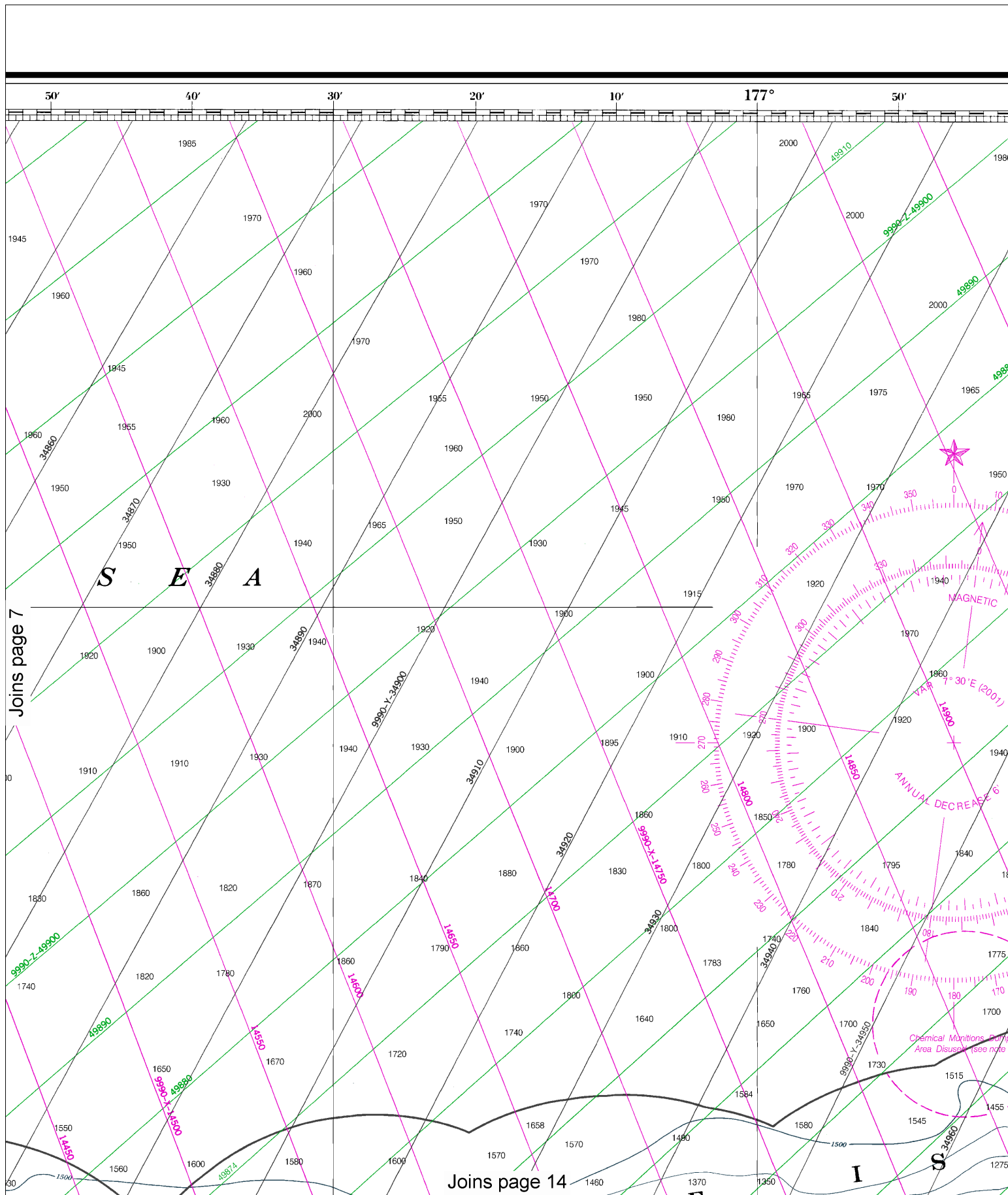
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Note: Chart grid  
lines are aligned  
with true north.



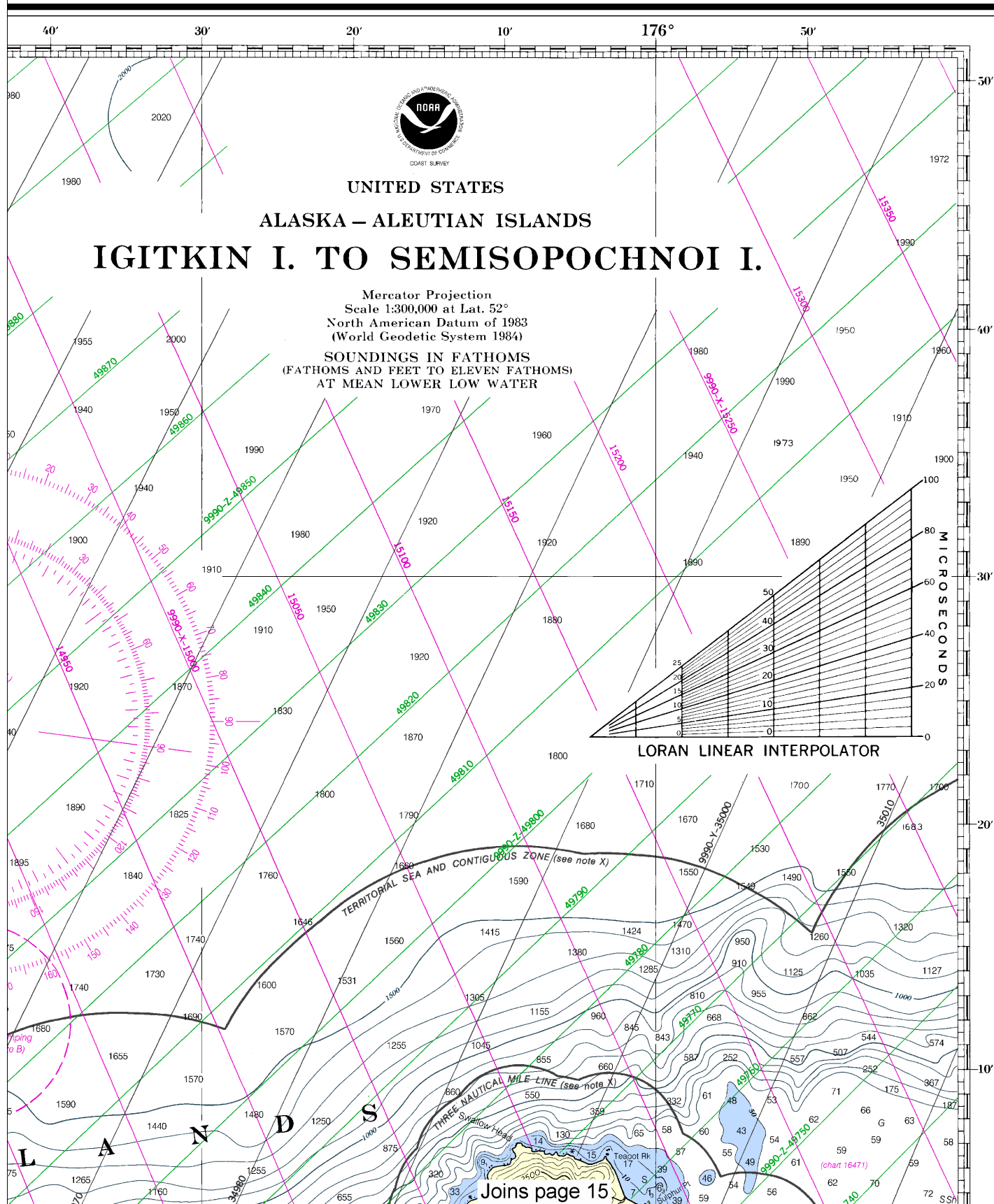
This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4812 11/27/2012,  
 NGA Weekly Notice to Mariners: 4812 12/1/2012,  
 Canadian Coast Guard Notice to Mariners: 0912 9/28/2012.

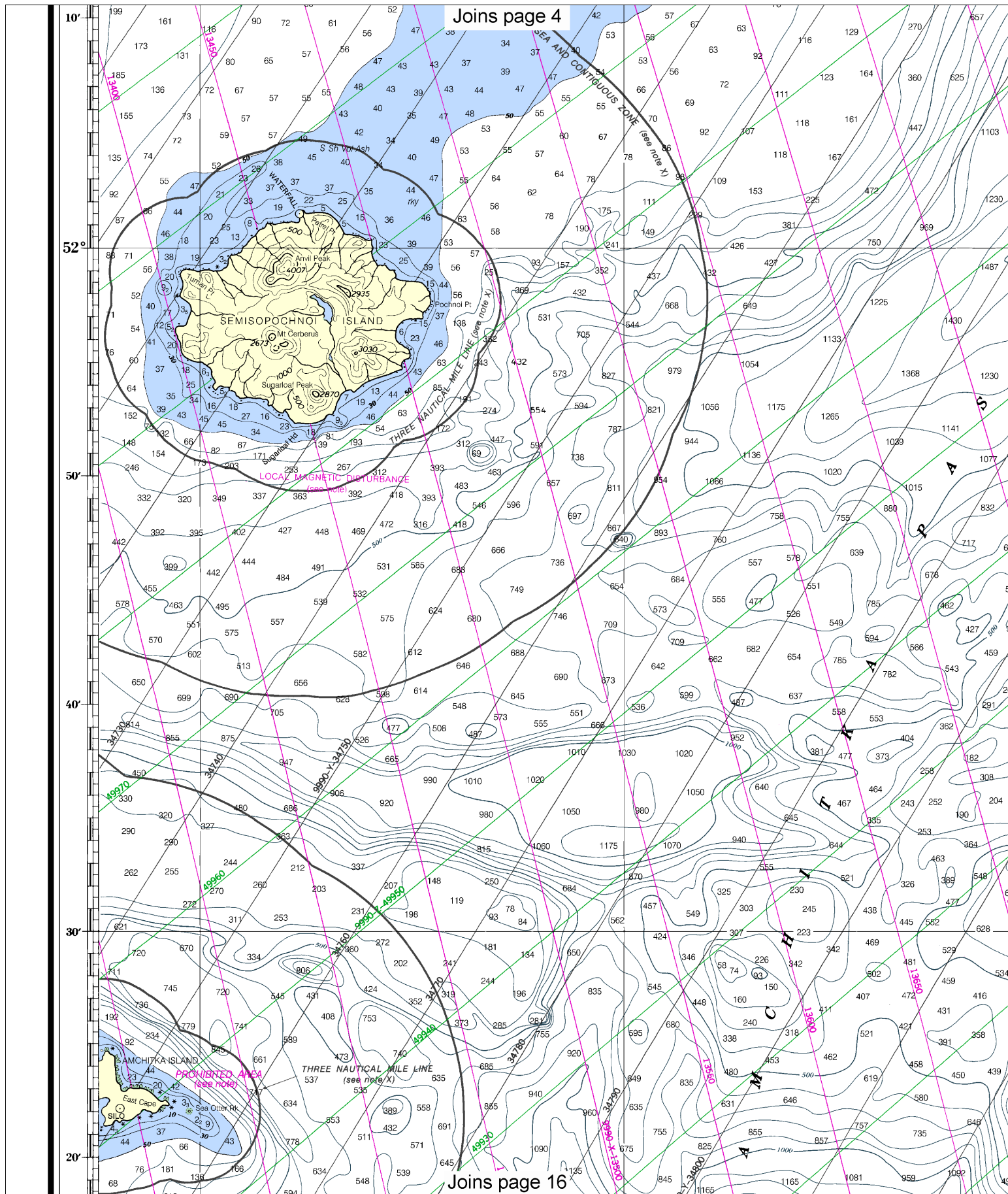




(FATHOMS AND FEET TO 11 FATHOMS)

Nautical Chart Catalog No. 3, Panels C, D, H, M

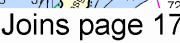


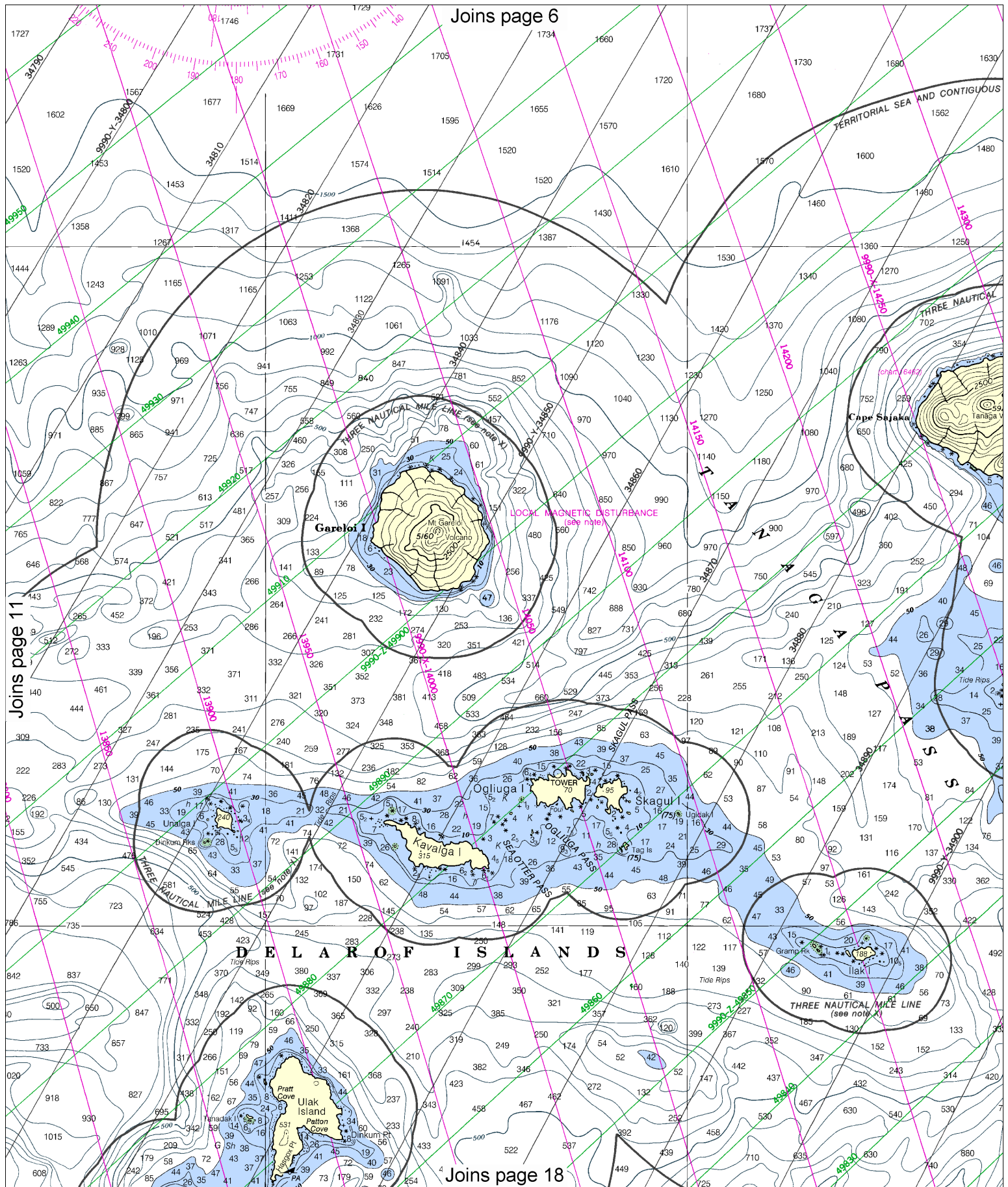


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Note: Chart grid lines are aligned with true north.







Joins page 6

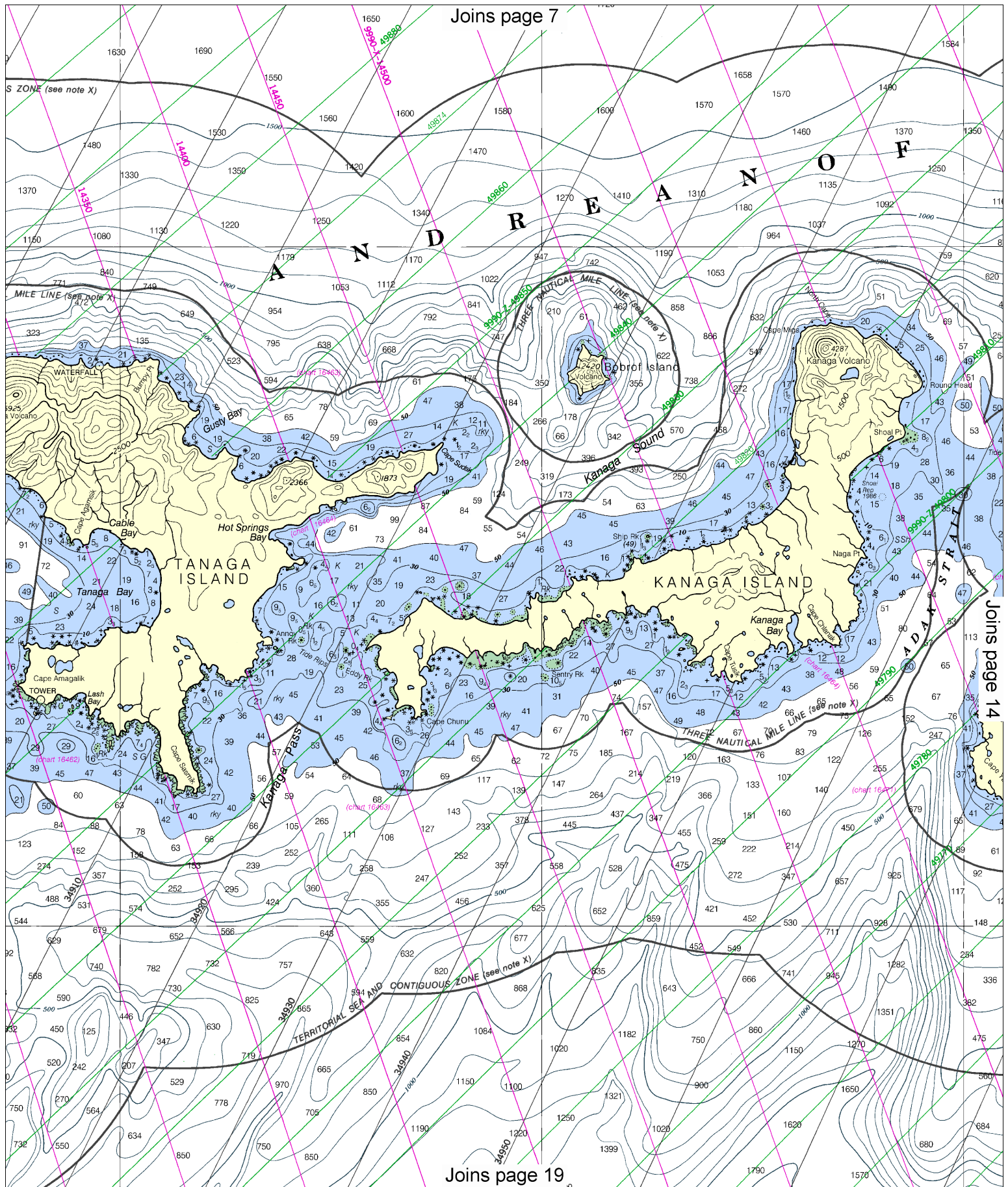
Joins page 11

Joins page 18

12

Note: Chart grid lines are aligned with true north.



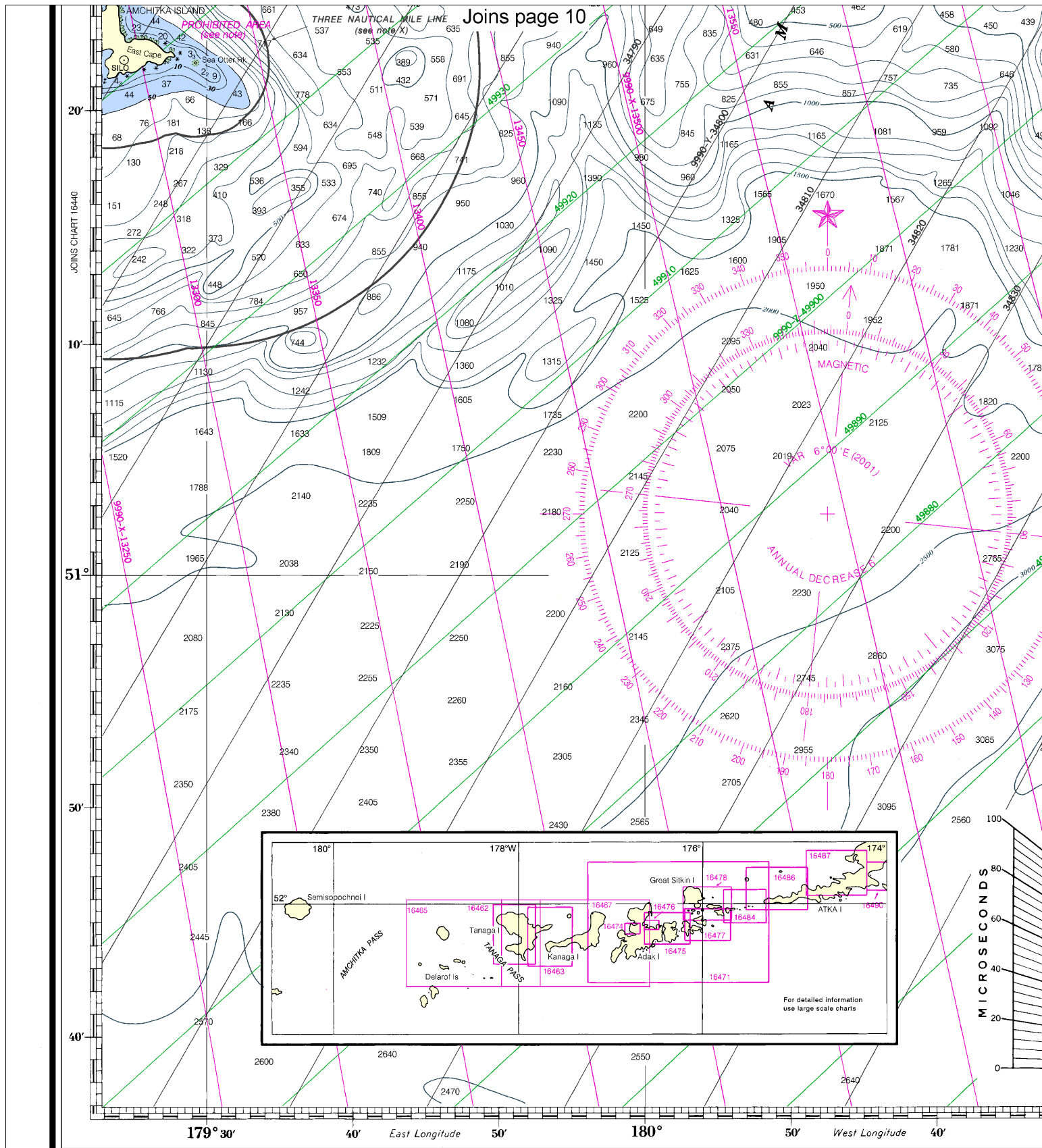








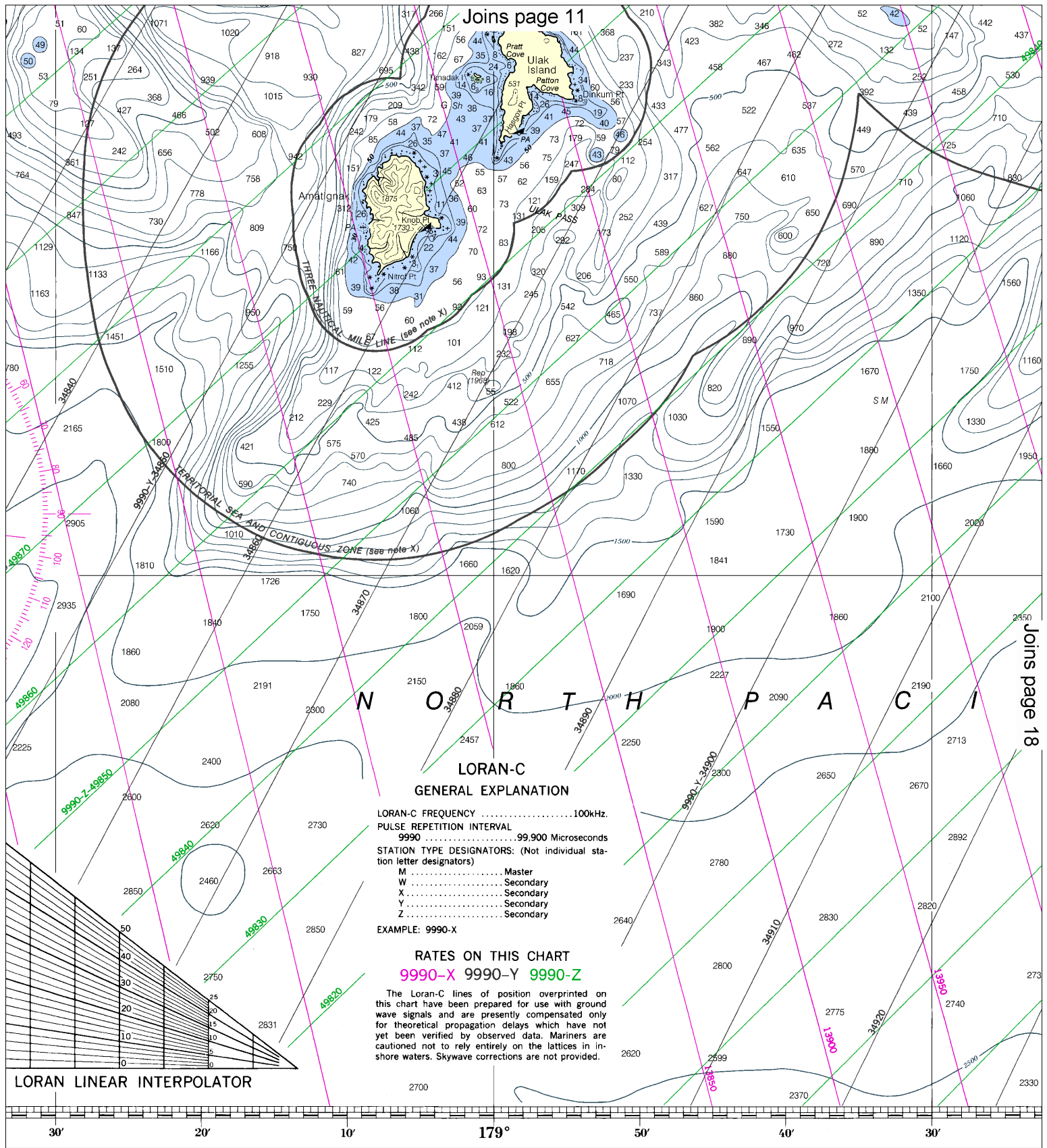


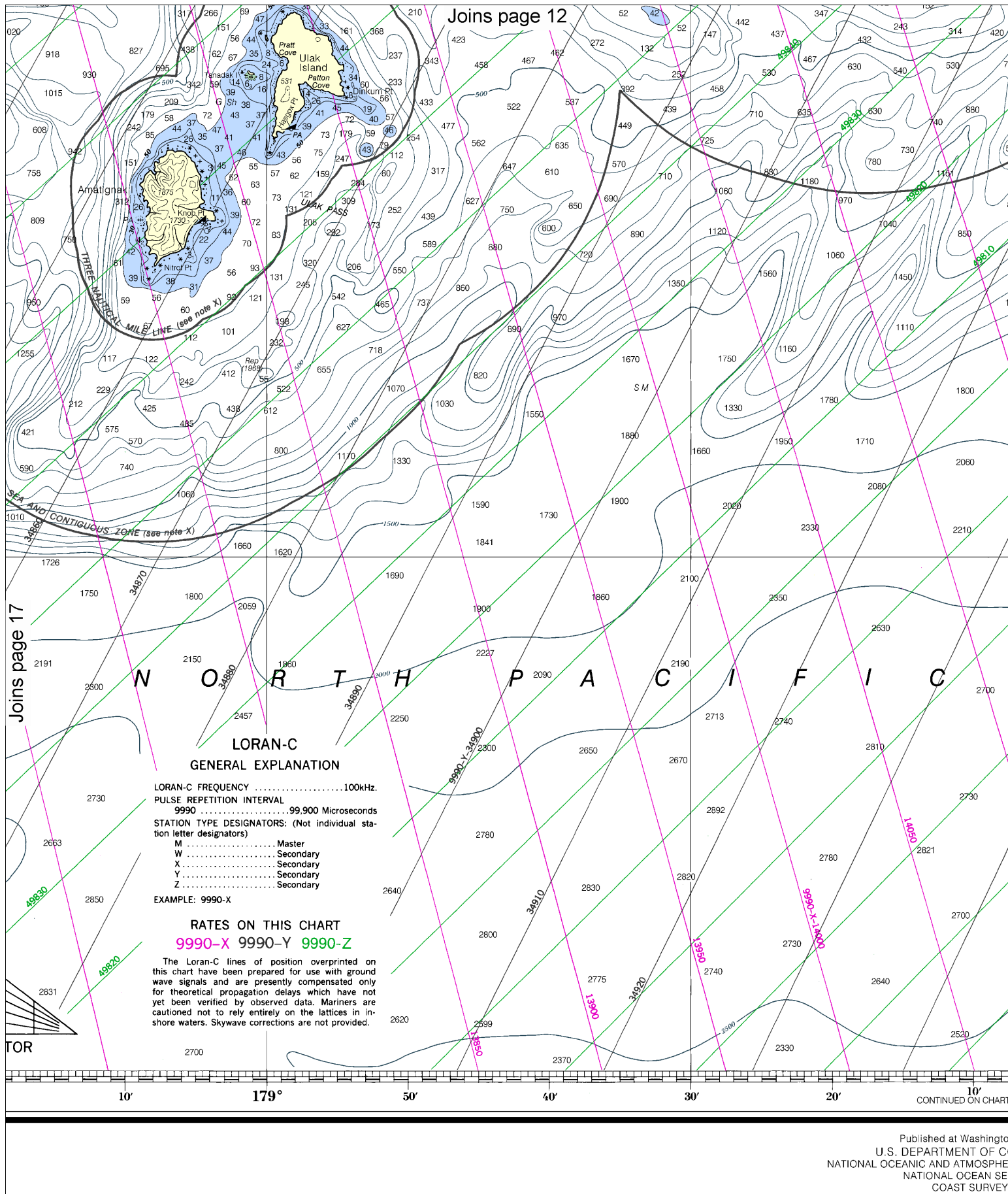


16

Note: Chart grid lines are aligned with true north.







Joins page 12

Joins page 17

# NORTH PACIFIC

## LORAN-C GENERAL EXPLANATION

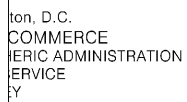
LORAN-C FREQUENCY .....100kHz.  
PULSE REPETITION INTERVAL  
9990 .....99,900 Microseconds  
STATION TYPE DESIGNATORS: (Not individual station letter designators)  
M .....Master  
W .....Secondary  
X .....Secondary  
Y .....Secondary  
Z .....Secondary  
EXAMPLE: 9990-X

## RATES ON THIS CHART 9990-X 9990-Y 9990-Z

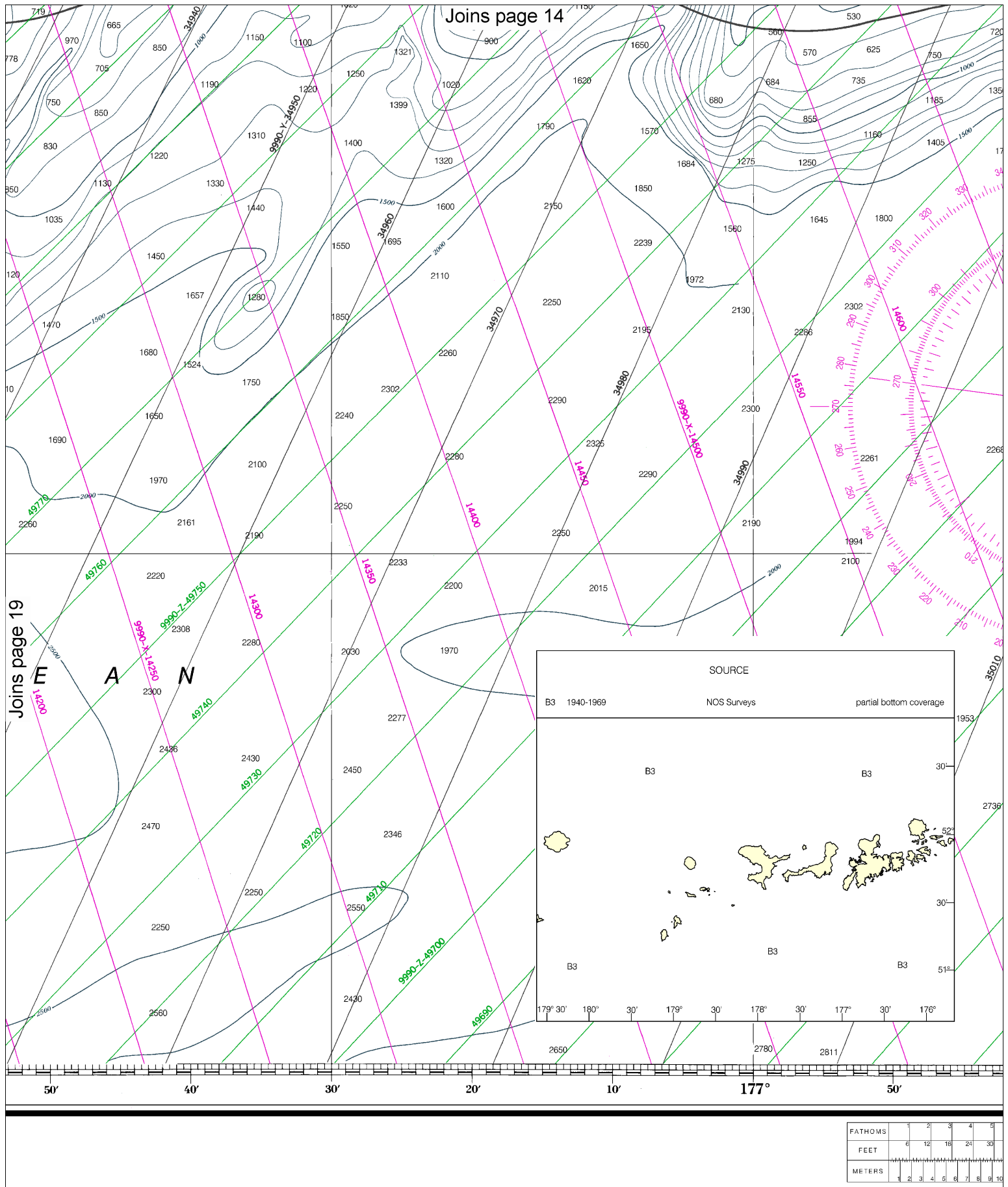
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Published at Washington  
U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SERVICE  
COAST SURVEY

Note: Chart grid lines are aligned with true north.

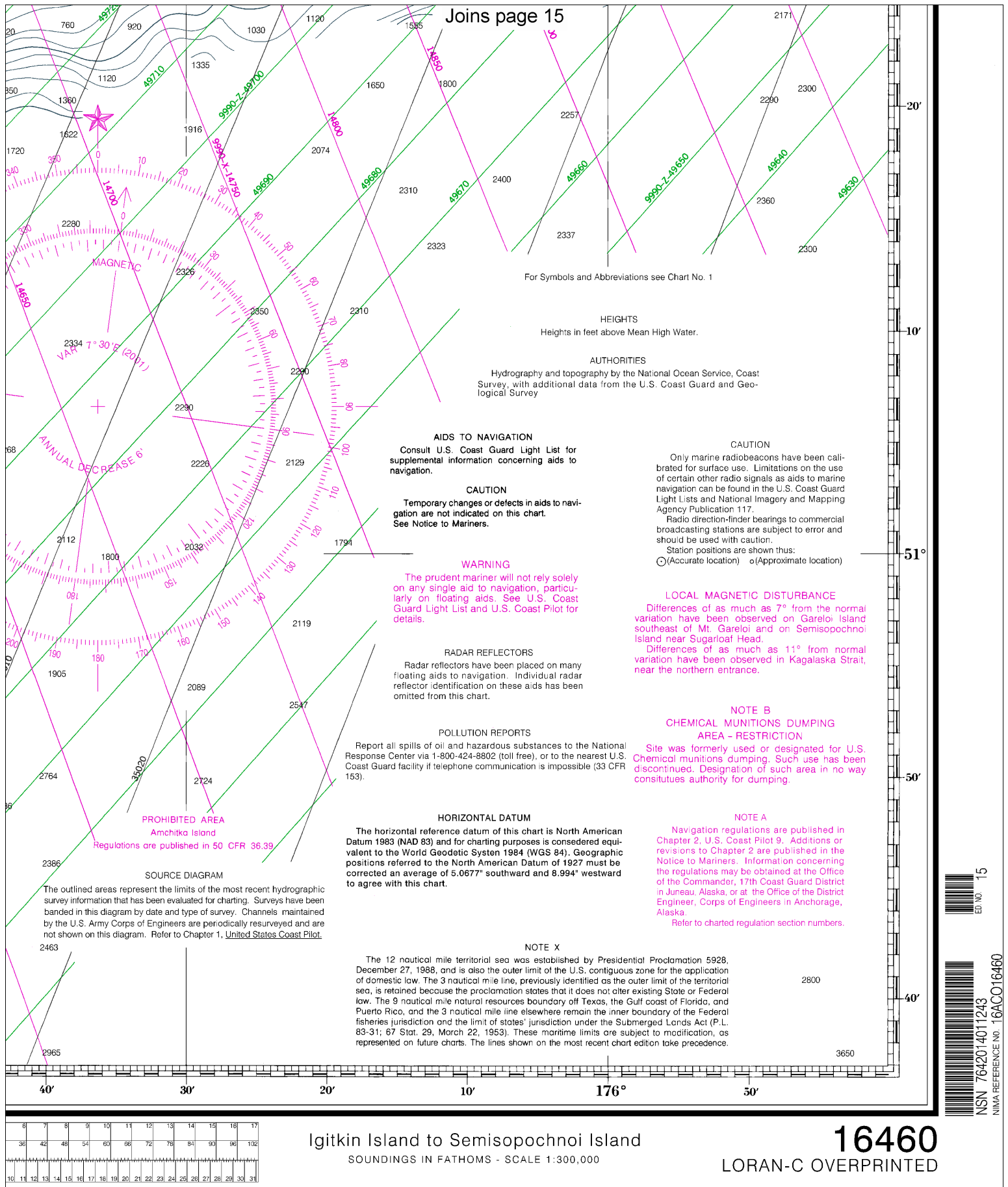






20

Note: Chart grid lines are aligned with true north.



Joins page 15

For Symbols and Abbreviations see Chart No. 1

HEIGHTS  
Heights in feet above Mean High Water.

AUTHORITIES  
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard and Geological Survey

AIDS TO NAVIGATION  
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION  
Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

WARNING  
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

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AREA - RESTRICTION  
Site was formerly used or designated for U.S. Chemical munitions dumping. Such use has been discontinued. Designation of such area in no way constitutes authority for dumping.

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Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.  
Refer to charted regulation section numbers.

Igitkin Island to Semisopochnoi Island  
SOUNDINGS IN FATHOMS - SCALE 1:300,000

16460  
LORAN-C OVERPRINTED

21



## VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

**Channel 9** – Communications between boats and ship-to-coast.

**Channel 13** – Navigation purposes at bridges, locks, and harbors.

**Channel 16** – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

**Channel 22A** – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

**Channels 68, 69, 71, 72 and 78A** – Recreational boat channels.

**Getting and Giving Help** — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

## Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

**HAVE ALL PERSONS PUT ON LIFE JACKETS!**



**NOAA Weather Radio All Hazards (NWR)** is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

## Quick References

Nautical chart related products and information	—	<a href="http://www.nauticalcharts.noaa.gov">http://www.nauticalcharts.noaa.gov</a>
Online chart viewer	—	<a href="http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html">http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html</a>
Report a chart discrepancy	—	<a href="http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx">http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx</a>
Chart and chart related inquiries and comments	—	<a href="http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs">http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs</a>
Chart updates (LNM and NM corrections)	—	<a href="http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html">http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html</a>
Coast Pilot online	—	<a href="http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm">http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm</a>
Tides and Currents	—	<a href="http://tidesandcurrents.noaa.gov">http://tidesandcurrents.noaa.gov</a>
Marine Forecasts	—	<a href="http://www.nws.noaa.gov/om/marine/home.htm">http://www.nws.noaa.gov/om/marine/home.htm</a>
National Data Buoy Center	—	<a href="http://www.ndbc.noaa.gov/">http://www.ndbc.noaa.gov/</a>
NowCoast web portal for coastal conditions	—	<a href="http://www.nowcoast.noaa.gov/">http://www.nowcoast.noaa.gov/</a>
National Weather Service	—	<a href="http://www.weather.gov/">http://www.weather.gov/</a>
National Hurricane Center	—	<a href="http://www.nhc.noaa.gov/">http://www.nhc.noaa.gov/</a>
Pacific Tsunami Warning Center	—	<a href="http://ptwc.weather.gov/">http://ptwc.weather.gov/</a>
Contact Us	—	<a href="http://www.nauticalcharts.noaa.gov/staff/contact.htm">http://www.nauticalcharts.noaa.gov/staff/contact.htm</a>



— For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey



The Nation's Chartmaker